

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re Application of:

Eric Olson and Jeffrey A. Spencer

Serial No.: 10/775,627

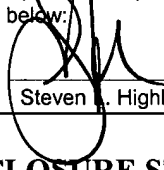
Filed: February 10, 2004

For: *METHODS AND COMPOSITIONS FOR  
STABILIZING MICROTUBULES AND  
INTERMEDIATE FILAMENTS IN  
STRIATED MUSCLE CELLS*

Group Art Unit: Unknown

Examiner: Unknown

Atty. Dkt. No.: MYOG:028USD1

CERTIFICATE OF MAILING 37 C.F.R. 1.8	
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Date	Steven L. Highlander

**INFORMATION DISCLOSURE STATEMENT**

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Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record.

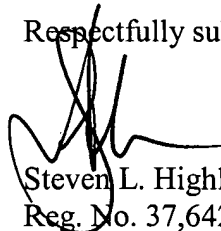
In accordance with 37 C.F.R. §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/MYOG:028USD1.

This application is a divisional application of Serial No. 09/908,988, filed July 18, 2001 and is relied upon for an earlier filing date under 35 U.S.C. § 120. In accordance with Rule 37 C.F.R. § 1.98(d) copies of the listed documents are not enclosed as they have been previously cited by or submitted to the Patent and Trademark Office in prior application Serial No. 09/908,988.

Applicants respectfully request that the listed documents be made of record in the present case.

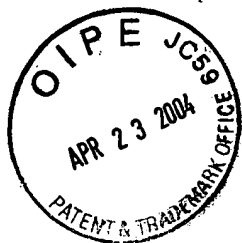
Respectfully submitted,



Steven L. Highlander  
Reg. No. 37,642  
Attorney for Applicants

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Date: April 20, 2004



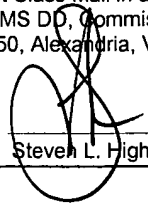
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Date	
	Steven L. Highlander

**MS DD**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Re: *Serial Number 10/775,627 entitled "METHODS AND COMPOSITIONS FOR STABILIZING MICROTUBULES AND INTERMEDIATE FILAMENTS IN STRIATED MUSCLE CELLS" by Eric Olson and Jeffrey A. Spencer*  
*Our reference: MYOG:028USD1*


Sir :

Enclosed for filing in the above-referenced patent application is an Information Disclosure Statement and Form PTO-1449.

No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to the enclosed materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/MYOG:028USD1.

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Respectfully submitted,

  
Steve Highlander  
Reg. No. 37,642

SLH/cas  
Encl.: As noted

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Form PTO-1449 (modified)

List of Patents and Publications

## INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

Atty. Docket No.  
MYOG:028USD1Serial No.  
10/775,627Applicant  
Eric N. Olson  
Jeffrey A. SpencerFiling Date:  
February 10, 2004Group:  
UnknownU.S. Patent Documents  
*See Page 1*Foreign Patent Documents  
*See Page 1*Other Art  
*See Page 1*

## U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.
	A1	5,403,711	4/4/95	Walder et al.	435	6	7/6/93
	A2	6,060,240	5/9/00	Kamb et al.	435	6	12/13/96
	A3	6,096,720	8/1/00	Love et al.	514	44	4/23/98
	A4	6,248,724	6/19/01	Moore et al.	514	44	9/25/98

## Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	WO 00/58473	10/5/00	PCT			
	B2	WO 01/42302	6/14/01	PCT			Abstract
	B3	WO 01/55322	8/2/01	PCT			
	B4	WO 01/62767	8/30/01	PCT			

## Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Antin <i>et al.</i> , "Taxol induces postmitotic myoblasts to assemble interdigitating microtubule-myosin arrays that exclude actin filaments," <i>J. Cell Biol.</i> , 90(2):300-308, 1981.
	C2	Bartkiewicz <i>et al.</i> , "Leucine zipper-mediated homodimerization of the adaptor protein c-Cbl. A role in c-Cbl's tyrosine phosphorylation and its association with epidermal growth factor receptor," <i>J. Biol. Chem.</i> , 274(43):30887-30895, 1999.
	C3	Benjamin <i>et al.</i> , "Temporospatial expression of the small HSP/alpha B-crystallin in cardiac and skeletal muscle during mouse development," <i>Dev. Dyn.</i> , 208(1):75-84, 1997.
	C4	Borden, "RING fingers and B-boxes: zinc-binding protein-protein interaction domains," <i>Biochem. Cell Biol.</i> , 76:351-358, 1998.

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DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

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APR 23 2004

Atty. Docket No.

Serial No.

MYOG:028USD1

10/775,627

List of Patents and Publications for Applicant's  
INFORMATION DISCLOSURE STATEMENT

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Applicant

Eric N. Olson

Jeffrey A. Spencer

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U.S. Patent Documents

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Exam. Init.	Ref. Des.	Citation
	C5	Buchner <i>et al.</i> , "MID2, a homologue of the Opitz syndrome gene MID1: similarities in subcellular localization and differences in expression during development," <i>Hum. Mol. Genet.</i> , 8:1397-1407, 1999.
	C6	Cainarca <i>et al.</i> , "Functional characterization of the Opitz syndrome gene product (midin): evidence for homodimerization and association with microtubules throughout the cell cycle," <i>Hum. Mol. Genet.</i> , 8:1387-1396, 1999.
	C7	Cao <i>et al.</i> , "Involvement of the rfp tripartite motif in protein-protein interactions and subcellular distribution," <i>J. Cell Sci.</i> , 110(Pt 14):1563-1571, 1997.
	C8	Centner <i>et al.</i> , "Identification of muscle specific ring finger proteins as potential regulators of the titin kinase domain," <i>J. Mol. Biol.</i> , 306:717-726, 2001.
	C9	Database EMBL accession No. AA840584.
	C10	Database EMBL accession No. AAS25842.
	C11	Database EMBL accession No. AAS25855.
	C12	Database EMBL accession No. AAU15855.
	C13	Database EMBL accession No. AAU15868.
	C14	Database EMBL accession No. AB030912.
	C15	Database EMBL accession No. AF294790.
	C16	Database EMBL accession No. AI644642.
	C17	Database EMBL accession No. AJ291712.
	C18	Database EMBL accession No. AJ291713.
	C19	Database EMBL accession No. AV006036.
	C20	Database EMBL accession No. AV006120.
	C21	De The <i>et al.</i> , "The PML-RAR $\alpha$ fusion mRNA generated by the t(15;17) translocation in acute promyelocytic leukemia encodes a functionally altered RAR," <i>Cell</i> , 66(4):675-684, 1991.
	C22	Francis <i>et al.</i> , "Doublecortin is a developmentally regulated, microtubule-associated protein expressed in migrating and differentiating neurons," <i>Neuron</i> , 23:247-256, 1999.

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Exam. Init.	Ref. Des.	Citation
	C23	Freemont, "Ubiquitination: RING for destruction?" <i>Curr Biol.</i> , 10(2):R84-87, 2000.
	C24	Gleeson <i>et al.</i> , "Doublecortin is a microtubule-associated protein, and is expressed widely by migrating neurons," <i>Neuron.</i> , 2:257-271, 1999.
	C25	Gunderson <i>et al.</i> , "Generation of stable, posttranslationally modified microtubule array is an early event in myogenic differentiation," <i>J. Cell Biol.</i> , 109:2275-2288, 1989.
	C26	Hsieh <i>et al.</i> , "The RING finger/B-Box factor TAM-1 and a retinoblastoma-like protein LIN-35 modulate context-dependent gene silencing in <i>Caenorhabditis elegans</i> ," <i>Genes Dev.</i> , 13(22):2958-2970, 1999.
	C27	Kaech <i>et al.</i> , "Cytoskeletal plasticity in cells expressing neuronal microtubule-associated proteins," <i>Neuron</i> , 17(6):1189-1199, 1996.
	C28	Kaufman <i>et al.</i> , "The M-cadherin catenin complex interacts with microtubules in skeletal muscle cells: implications for the fusion of myoblasts," <i>J. Cell Sci.</i> , 112:55-67, 1999.
	C29	Konno <i>et al.</i> , EMBL database, Accession No. BB140247, published June 28, 2000.
	C30	Kosik, "Tau protein and neurodegeneration," <i>Mol. Neurobiol.</i> , 4(3-4):171-179, 1990.
	C31	Lee <i>et al.</i> , "Myosin light chain-2 luciferase transgenic mice reveal distinct regulatory programs for cardiac skeletal muscle-specific expression of a single contractile protein gene," <i>J. Biol. Chem.</i> , 267(22):15875-15885, 1992.
	C32	Lee <i>et al.</i> , EMBL database, Accession No. AA800245, published April 30, 1998.
	C33	Li <i>et al.</i> , "The association of <i>Xenopus</i> nuclear factor 7 with subcellular structures is dependent upon phosphorylation and specific domains," <i>Exp. Cell Res.</i> , 13(2):473-481, 1994.
	C34	Lo Nigro <i>et al.</i> , "Point mutations and an intragenic deletion in LIS1, the lissencephaly causative gene in isolated lissencephaly sequence and Miller-Dieker syndrome," <i>Hum. Mol. Genet.</i> , 6(2):157-164, 1997.
	C35	Mangan and Olmsted, "A muscle-specific variant of the microtubule-associated protein 4 (MAP4) is required for myogenesis," <i>Dev.</i> , 122:771-781, 1996.
	C36	Marszalek <i>et al.</i> , "Situs inversus and embryonic ciliary morphogenesis defects in mouse mutants lacking the KIF3A subunit of kinesin-II," <i>Proc. Nat'l Acad. Sci.</i> , 96(9):5043-5048, 1999.

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Exam. Init.	Ref. Des.	Citation
	C37	Nguyen <i>et al.</i> , "Overexpression of full- or partial-length MAP4 stabilizes microtubules and alters cell growth," <i>J. Cell Sci.</i> , 110 ( Pt 2):281-294, 1997.
	C38	Nguyen <i>et al.</i> , "Stabilization and functional modulation of microtubules by microtubule-associated protein 4," <i>Biol. Bull.</i> , 194(3):354-357, 1998.
	C39	Quaderi <i>et al.</i> , "Opitz G/BBB syndrome, a defect in midline development, is due to mutation in a new RING finger gene on Xp22," <i>Nat. Gen.</i> , 17:285-291, 1997.
	C40	Rawls <i>et al.</i> , "Overlapping functions of the myogenic bHLH genes MRF4 and MyoD revealed in double mutant mice," <i>Development</i> , 125(13):2349-2358, 1998.
	C41	Sapir <i>et al.</i> , "LIS1 is a microtubule-associated phosphoprotein," <i>Eur. J. Biochem.</i> , 265(1):181-188, 1999.
	C42	Sapir <i>et al.</i> , "Reduction of microtubule catastrophe events by LIS1, platelet-activating factor acetylhydrolase subunit," <i>EMBO J.</i> , 16(23):6977-6984, 1997.
	C43	Sato <i>et al.</i> , "Microtubule stabilization in pressure overload cardiac hypertrophy," <i>J. Cell Biol.</i> , 139:963-973, 1997.
	C44	Saurin <i>et al.</i> , "Does this have a familiar RING?" <i>TIBS</i> , 21(6):208-214, 1996.
	C45	Schulze <i>et al.</i> , "Posttranslational modification and microtubule stability," <i>J. Cell Biol.</i> , 105: 2167-2177, 1987.
	C46	Schweiger <i>et al.</i> , "The Opitz syndrome gene product, MID1, associates with microtubules," <i>Proc. Nat'l Acad. Sci. USA</i> , 96:2794-2799, 1999.
	C47	Sotiropoulos <i>et al.</i> , "Signal-regulated activation of serum response factor is mediated by changes in actin dynamics," <i>Cell.</i> , 98: 159-169, 1999.
	C48	Spencer and Misra, "Expression of the serum response factor gene is regulated by serum response factor binding sites," <i>J. Biol. Chem.</i> , 271(28):16535-16543, 1996.
	C49	Spencer <i>et al.</i> , "Cooperative transcriptional activation by serum response factor and the high mobility group protein SSRP1," <i>J. Biol. Chem.</i> , 274(22):15686-15693, 1999.
	C50	Spencer <i>et al.</i> , "Regulation of microtubule dynamics and myogenic differentiation by MURF, a striated muscle RING-finger protein," <i>J. Cell Biol.</i> , 150(4):771-784, 2000.

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Exam. Init.	Ref. Des.	Citation
	C51	Stone and Chambers, "Microtubule inhibitors elicit differential effects on MAP kinase (JNK, ERK, and p38) signaling pathways in human KB-3 carcinoma cells," <i>Exp. Cell. Res.</i> , 254: 110-119, 2000.
	C52	Supp <i>et al.</i> , "Targeted deletion of the ATP binding domain of left-right dynein confirms its role in specifying development of left-right asymmetries," <i>Dev.</i> , 126:5495-5504, 1999.
	C53	Takeda <i>et al.</i> , "Left-right asymmetry and kinesin superfamily protein KIF3A: new insights in determination of laterality and mesoderm induction by kif3A <sup>-/-</sup> mice analysis," <i>J. Cell Biol.</i> , 145:825-836, 1999.
	C54	Takemura <i>et al.</i> , "Increased microtubule stability and alpha tubulin acetylation in cells transfected with microtubule-associated proteins MAP1B, MAP2 or tau," <i>J. Cell Sci.</i> , 103 ( Pt 4):953-964, 1992.
	C55	Tolnay and Probst, "Review: tau protein pathology in Alzheimer's disease and related disorders," <i>Neuropathol. Appl. Neurobiol.</i> , 25(3):171-187, 1999.
	C56	Toyama <i>et al.</i> , "Effects of taxol and Colcemid on myofibrillogenesis," <i>Proc. Natl. Acad. Sci.</i> , 79(21):6556-6560, 1982.
	C57	Wang <i>et al.</i> , "Removal of MAP4 from microtubules in vivo produces no observable phenotype at the cellular level," <i>J. Cell Biol.</i> , 132(3):345-357, 1996.
	C58	Webster, "Neonatal rat cardiomyocytes possess a large population of stable microtubules that is enriched in post-translationally modified subunits," <i>J. Mol. Cell Cardio.</i> , 29:2813-2824, 1997.
	C59	Zetser <i>et al.</i> , "p38 mitogen-activated protein kinase pathway promotes skeletal muscle differentiation. Participation of the MEF2C transcription factor," <i>J. Biol. Chem.</i> , 274: 5193-5200, 1999.

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